power redefined



User's Manual

Manuel de l'utilisateur / Anwenderhandbuch

Manuale per l'operatore / Manual del usuario

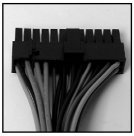
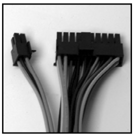
TRUEPOWER 2.0

Quietly Powerful

Antec TruePower 2.0 User's Manual
ATX12V version 2.0 power supply
Models: TPII-380, TPII-430, TPII-480, TPII-550, TPII-480Blue, TrueControl II-550

TruePower 2.0 series power supplies comply with the newest ATX12V version 2.0 specifications. This includes dual 12V output circuitry that delivers safer and more reliable output to your system's components, as well as higher energy efficiency, which reduces power consumption by up to 25%, saving you money on your electricity bill. In addition we've included a variety of industrial-grade protective circuitry: OCP (Over Current Protection), OPP (Over Power Protection), UVP (Under Voltage Protection), and SCP (Short Circuit Protection).

Connectors: TruePower 2.0 is an ATX12V version 2.0 form factor power supply. It has a 24-and-20-pin Main Power Connector (pic 1, pic 2), a 4-pin +12V Power Connector, five 4-pin Peripheral Connectors, four 15-pin Serial ATA Connectors, and one 6-pin PCI-Express power connector.

This power supply is backwards-compatible with previous ATX form factor power supplies. To make sure you connect your power supply properly, please refer to the user manuals supplied with your motherboard and peripherals before connecting TruePower 2.0 to any of your devices.

TruePower 2.0 includes an advanced temperature response system that provides optimum balance between noise reduction and cooling. The power supply fan will always run at the lowest speed possible for existing load and conditions. Furthermore, it can also control the speed of your system case fans. You will find two dedicated fan connectors (marked "Fan Only") to which you can connect your system case fans. TruePower 2.0 will then regulate your case fans, further reducing system noise. **Note:** please don't connect more than three external fans to the "Fan Only" connectors. If you need more cooling power than that, you can connect your case fans to the regular 4-pin peripheral connectors, but that setup won't be as quiet as our recommended setup. **Note:** Antec does NOT recommend connecting a CPU fan to the "Fan Only" connectors.

We've also included a 3-pin fan signal connector. Connect it to one of the fan connectors on your motherboard. You can monitor the speed of the rear power supply fan through your motherboard BIOS or through the monitoring software included with your motherboard. Note: When temperatures are low, the speed of the fan many drop below 1000 RPM. At such low speeds, some motherboards may not be able to properly detect the fan speed and may generate a false fan failure warning. To ensure proper fan monitoring, please refer to your motherboard manual.

Active Power Factor Correction (applicable only to models designed for sale in the European Union): TruePower 2.0 models designed for the EU include Power Factor Correction (PFC) circuitry in accordance with European standard regulation code EN61000-3-2.

Power Switch: This power supply comes with a main power switch. Make sure you turn the switch to the ON (I) position before you boot up your computer for the first time. In normal operation there is no need to turn the switch to the OFF (O) position since the power supply is

equipped with a soft on/off feature which turns your computer on and off through the soft switch on your computer case. You may need to turn the switch to the OFF position occasionally should your computer crash and you cannot shut it down using the soft switch.

Installation:

1. Disconnect the power cord from your old power supply.
2. Open your computer case. Follow the directions provided in your case manual.
3. Disconnect all power connectors from the motherboard and from the peripherals devices such as case fans, hard drives, optical drives, floppy drives, etc.
4. Remove the existing power supply from your computer case and replace it with your new Antec power supply.
5. **Note** (NOT applicable to models designed for the European Union): Before you install your new power supply, check the red power supply voltage switch setting. It should match your local power voltage (115V for North America, Japan, etc., 230V for Europe, South East Asia, and many other countries). Change the voltage setting if necessary. If you use the wrong voltage setting, you could damage your system and void your warranty.
6. Connect the 24-and-20-pin Main Power Connector and the 4-pin +12V Connector to your motherboard as needed.
7. Connect the peripheral power connectors to devices such as hard drives, optical drives, etc.
8. Connect the Serial ATA connectors if you are using Serial ATA hard or optical drives.
9. Connect the PCI Express power connector to your PCI Express graphic card as needed.
10. You can connect up to three fans to the dedicated "Fan Only" connectors. **Note:** Do not connect devices other than fans to these connectors. If you prefer True Power 2.0 to not control your case fans, you can connect your case fans to the regular 4-pin peripheral connectors.
11. **Optional:** If you'd like to monitor the speed if the power supply fan, connect the 3-pin fan signal connector to one of the fan connectors on your motherboard. **Note:** You don't need to connect the fan signal connector in order for the power supply to work.
12. Close your computer case and connect the AC power cord to the power supply.

Appendix A:

Reading Your Voltages

If you wish to verify the voltage outputs of your power supply, we strongly recommend using a multi-meter. Motherboard BIOS readings of the +12V and +5V outputs, and software programs which depend upon motherboard voltage reports for their source information, are frequently inaccurate. (Please see http://www.antec.com/mobo_voltage_test.html for an example.) To measure the outputs accurately, the power supply must be turned on and have the minimum rated load attached to it. We recommend using Antec's ATX Power Supply Tester for this purpose. To test with a motherboard+CPU+RAM combination, please check your other equipment manuals and confirm that your setup meets the minimum rated load requirements.

Caution: Failure to properly implement the testing procedure described below could result in damage to your TruePower 2.0 or computer system. Any damage resulting from setting or connecting your test equipment incorrectly or to the wrong outputs is not covered by the limited product warranty.

NOTE: To test the voltages on a TrueControl II-550 power supply, you must first connect the control panel (see Appendix B). Without the control panel connected, all voltage circuits will function only at their rated minimum voltage.

To measure the +12V1, +12V2, +5V and +3.3V outputs:

1. Set the measuring dial of your meter to VDC. Choose a maximum measuring range of +20VDC or higher.
2. To measure the +12V1 output: Use a 4-pin Molex connector from the power supply and insert the positive pole (red) to the connector pin with the yellow wire. Insert the negative (black) to one of the connector pins with a black ground wire.
3. To measure the +12V2 output: Use the 4-pin +12V CPU Power connector from the power supply and insert the positive pole (red) to a connector pin with a yellow wire. Insert the negative (black) to one of the connector pins with a black ground wire.
4. To measure the +5V: Use a 4-pin Molex connector from the power supply and insert the positive pole (red) to the connector pin with the red wire. Insert the negative (black) to one of the connector pins with a black ground wire.
5. To measure the +3.3V: Use a Serial ATA connector and a 4-pin Molex connector from the power supply and carefully touch the positive pole (red) to the tiny pins in the Serial ATA connector that are connected to the orange wire. Insert the negative (black) pole to one of the connector pins in the 4-pin Molex connector with a black ground wire. You may measure the +5V and +12V1 (red and yellow wires respectively) on the Serial ATA too by the same method.

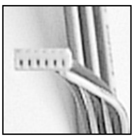
Appendix B — TrueControl II-550:

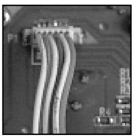
In addition to the features of TruePower 2.0, TrueControl II-550 features individual, front-accessible +5V, +3.3V, +12V voltage and fan speed controls. This allows user adjustment of individual voltages while the system is running, without interrupting system functions. With this functionality you can stabilize a heavily loaded system, even when overclocking. Additionally, this functionality allows adjustment of minimum speed of internal power supply fans and case fans connected to Fan Only connectors.

TrueControl II-550 consists of two parts: The TruePower 2.0 power supply and the control panel. This special power supply **must** be connected with the panel in order to function properly and control the voltages. The adjustment range is ±5% of the specified voltages under idle mode. Note: The +12V knob on the control panel controls both +12V1 and +12V2 of your power supply. By turning the +12V knob you will simultaneously change both +12V1 and +12V2 output readings.

Additional Installation for TrueControl II-550:

1. Install the 5.25" front control panel into your case just like other 5.25" device.
2. Connect the 6-pin white control panel connector (white cable) to the connector behind the control panel. The installation is completed. (pic 3, pic 4)





Using TrueControl II-550:

1. The default voltages are set at +12V, +5V, and +3.3V. Turn the knob clockwise to increase output voltage and counterclockwise to decrease output voltage. The range within which you can adjust the voltage is ±5% of the specified output voltage (see Table 1). Note: Changing the output settings does not affect the voltage feedback circuitry, so if for example you set your +5V output to +5.2V, the power supply voltage feedback will operate to keep the +5V output as close to +5.2V as possible.



2. To adjust the minimum fan speed, turn the knob clockwise to increase the speed. Note: The manual fan control does not override the built-in Low Noise Technology fan control circuitry. Turning the knob allows you to change the minimum fan speed. The minimum fan speed default is approximately 900 RPM. With the adjusting knob, you can set the minimum fan speed as high as the maximum fan speed of approximately 2100 RPM.

Table 1. Voltage Adjustment Range			
Output	Variation	Min. Voltage	Max. Voltage
+12V1 & +12V2	±5%	+11.4V	+12.60V
+3.3V	±5%	+3.14V	+3.47V
+5V	±5%	+4.75V	+5.25V

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